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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,024	03/18/2004	Yuichi Taguchi	HITC.0001	5121

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03/01/2006

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EXAMINER

DENNISON, JERRY B

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 03/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/803,024

Applicant(s)

TAGUCHI, YUICHI

Examiner

J. Bret Dennison

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/18/04 7/28/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This Action is in response to Application Number 10/803,024 received on 28 July 2005.
2. Claims 1-9 and 13 are presented for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klevans (U.S. 6,885,677) in view of Sheldon (Linktionary, "MPLS (Multiprotocol Label Switching)", August 11, 2003, "<http://web.archive.org/web/20030801193729/http://www.linktionary.com/m/mpls.html>").

3. Regarding claims 1, 5, 9, and 13, Klevans disclosed A method of using a general purpose computer as an MPLS-enabled label switched router in which the computer has multiple network interface cards providing multiple connections to neighboring label switching routers (Klevans, col. 4, lines 5-15) allowing the computer to be part of a virtual private network while utilizing the benefits of MPLS (Klevans, col. 5, lines 20-25).

Klevans did not explicitly state setting a service priority of a selected interface port to a client having a requested bandwidth.

In an analogous art that explains the MPLS protocol, Sheldon disclosed that MPLS supports traffic engineering to provide traffic prioritization and QOS. For example, a path can be created that provides high bandwidth and low delay for "premium" customers who are willing to pay for it (Sheldon, page 1, par. 3). Sheldon explained the key feature of MPLS is to build virtual circuits, also called label switching paths, across IP networks between two endpoints (Klevans, page 1, par. 2, 3). Sheldon explained that the paths are be engineered using manual or automatic techniques (Sheldon, page 1, par. 4).

RFC 2702 and RFC 3031 provide a more detailed support of how the MPLS protocol may be used and are hereby incorporated by reference as shown on page 3 of Sheldon. Both references further discuss specifics to bandwidth and prioritizing.

Klevans provides for a storage system that utilizes the benefits of MPLS (Klevans, col. 5, lines 20-25) over IP based networks (Klevans, col. 3, lines 25-25). This would motivate one of ordinary skill in the art at the time the invention was made to research the benefits of MPLS over IP networks. Since Sheldon provides a detailed explanation of how MPLS is used across IP-based networks such as service provider core networks or large enterprise networks (Sheldon, page 1, par. 1), one of ordinary skill in the art at the time the invention was made would incorporate the teachings of Sheldon into Klevans to efficiently manage bandwidth resources, to ensure that subsets of network resources do not become over utilized and congested while other subsets along alternate feasible paths remain underutilized (RFC2702, page 4. par. 1).

Therefore, Klevans and Sheldon disclosed in a storage system having a plurality of interface ports and a plurality of logical devices, wherein the interface ports are connected to a multiple protocol label switching (MPLS) network and the interface ports are formed to conduct MPLS protocol, a method of establishing a path between a logical device and a client connected to the MPLS network, comprising:

selecting an interface port from among the plurality of interface ports (Klevans, col. 4, lines 5-15, col. 6, lines 40-50);

establishing a label switching path via the selected interface port to a client having a requested bandwidth (Sheldon, page 1, par. 3);

setting a service priority of the selected interface port to the client in response to the requested bandwidth (Sheldon, page 1, par. 3); and
operatively connecting at least one logical device selected from the plurality of the logical devices to the selected interface port (Sheldon, page 1, par. 3).

4. Regarding claims 2 and 6, Klevans and Sheldon disclosed the limitations, substantially as claimed, as described in claim 1, including wherein said step of selecting the interface port from among the plurality of interface ports includes selecting the interface port based on a bandwidth characteristic of the interface port (Sheldon, page 1, par. 3, Sheldon disclosed a path being created based on bandwidth, meaning the port is chosen based on a bandwidth characteristic, page 1, par. 4, Sheldon disclosed paths elected based on parameters that constrain the forwarding direction,

which involves traffic engineering parameters, found in RFC 2702, the parameters both including bandwidth and priority).

5. Regarding claims 3 and 7, Klevans and Sheldon disclosed the limitations, substantially as claimed, as described in claim 2, including wherein said step of establishing a label switching path between the selected interface port and the client having a requested bandwidth includes establishing the label switch path based on performance characteristics of the label switch path and matching the bandwidth characteristic of the selected interface port with the performance characteristic of the label switch path (Sheldon, page 1, par. 3, Sheldon disclosed a path being created based on bandwidth, meaning the port is chosen based on a bandwidth characteristic, page 1, par. 4, Sheldon disclosed paths elected based on parameters that constrain the forwarding direction, which involves traffic engineering parameters, found in RFC 2702, the parameters both including bandwidth and priority).

6. Regarding claims 4 and 8, Klevans and Sheldon disclosed the limitations, substantially as claimed, as described in claim 1, including wherein said step of establishing a label switching path between the selected interface port and the client having a requested bandwidth includes establishing the label switch path based on performance characteristics of the label switch path (Sheldon, page 1, par. 3, Sheldon disclosed a path being created based on bandwidth, meaning the port is chosen based on a bandwidth characteristic, page 1, par. 4, Sheldon disclosed paths elected based on

parameters that constrain the forwarding direction, which involves traffic engineering parameters, found in RFC 2702, the parameters both including bandwidth and priority).

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Bret Dennison whose telephone number is (571) 272-3910. The examiner can normally be reached on M-F 8:30am-5pm.

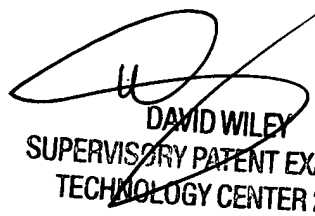
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J. B. D.
Patent Examiner
Art Unit 2143



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